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ABSTRACT

The third and fourth years of Project PACT (Parents and Children Together) were evaluated. The program was designed to involve Hispanic parents from an impoverished Philadelphia neighborhood in the education of their children in a bilingual school. The project consisted of two major components: a summer program to introduce parents to the school curriculum, and a school year program serving parents and other community members. Pupil performance on standardized tests, pupil attendance, and interviews with parents were used to assess the effects of parent participation in the programs. Parent participation in the summer program was associated with significant pupil improvements in reading skills, language arts, and attendance. Parents reported that they had learned ways to assist their children with reading and mathematics school work. The school year program in language arts and high school equivalency was well attended, and 35 participants earned diplomas. It was concluded that Project PACT has had a measurable effect on pupil Spanish and English reading skills, assisted Hispanic parents in helping their children with school work, and enhanced the educational attainment of adults in the community. (RW)

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PROJECT PACT

Parents and Children Together

Evaluations of the Third and Fourth Year

1979-1980

and

1980-1981

Office of Research, Planning and Evaluation

The School District of Philadelphia

Division of Federal Evaluation Resource Services

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PROJECT PACT
Parents and Children Together

EVALUATION OF THE THIRD YEAR
1979-1980

Report No. 8149

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EXECUTIVE SUMMARY

Project PACT (Parents and Children Together) was designed to complement the existing Let's Be Amigos bilingual program at Potter-Thomas School by involving Hispanic parents in the education of their children. During the summer, parents prepared curriculum packets under the supervision of curriculum developers and observed instruction of children. During the school year, English, Spanish, and GED high school equivalency courses were provided for adults and workshops were conducted.

Pupil performance on standardized tests and pupil attendance were used to measure the effect of up to three years of participation by parents in the project. Parental participation during the 1977 summer program was associated with statistically significantly higher scores during the spring, 1980 on three measures of language arts mastery (the Inter-American-Test of Reading in Spanish and the Vocabulary and Reading subtests of the Stanford Achievement Tests in English) when background characteristics of pupils were controlled. Hypotheses are offered regarding the reason that summer 1977, and not more recent parent participation, improved scores. When background characteristics were controlled, the attendance of participants' children and other similar children were not statistically significantly different.

Analysis of interviews of parents, conducted at the end of the summer program, suggested that most parents had learned ways to help their children with language arts and mathematics school work, but only half believed they had learned to help them with social studies work. Spanish and English GED and language arts course conducted during the school year attracted many participants, and 35 earned GED high school equivalency diplomas.

Program goals regarding workshops and field trips were met. Instructional packets to enable parents to help their children master school work were edited during the school year, but none were distributed.

PROJECT PACT

INTRODUCTION

Project PACT (Parents and Children Together) is designed to complement the Let's Be Amigos bilingual program at the Potter-Thomas School. The major activities of the project are: teaching parents about school operation and curriculum, acquainting parents with the cultural resources of Philadelphia and neighboring cities, and teaching basic skills to adults of the school community. As a result of these activities parents are expected to acquire new skills and their children's performance in school is expected to improve.

The project is composed of two major programs. The summer program serves parents of Hispanic children who attend or are about to attend the Potter-Thomas School. Children who live in the local community participate in classes which are observed by the parents. The school-year program serves parents and other adults of the local community. It includes high school equivalency classes, language arts classes in Spanish and English, workshops, and curriculum development.

RATIONALE

The Potter-Thomas School was selected as the project site because its LEA supported bilingual maintenance program enables all children to develop competence in English and in Spanish. Project PACT includes some components taught in English and others in Spanish, paralleling the language pattern of the school.

In the community served by Potter-Thomas School, many adults are immigrants from Puerto Rico, and many are unable to reinforce school learning at home. Many adults lack basic academic skills and are unaware of the resources in the community and the city. In order to help these parents become resources for their children, academic, cultural, practical, and school curriculum content will be taught to them. The parents, in turn, will help their children be more successful in school.

PREVIOUS FINDINGS

In 1978-1979, the effect of parent participation in the summer program on children's achievement and attendance was determined. Parental participation was associated with statistically significantly higher pupil scores on all four measures of language arts mastery (the Inter-American Test of Reading in Spanish and the Vocabulary, Reading, and Word Study Skills Subtests of the Stanford Achievement Tests in English) when background characteristics of pupils were controlled. When background characteristics were controlled, the difference between the attendance of children of participants and other similar children was not statistically significant.

Analysis of parent interviews conducted during the summer program revealed a statistically significant gain in participants' knowledge of ways to help children with school work. Thirty school-year program participants earned GED high-school equivalency diplomas, and program goals regarding workshops and field trips were met. Instructional packets to enable parents to help their children master school work were written during the school year, but required editing before they could be given to parents.

During the first program year, a true-false test designed to measure parents' acquisition of information about the Potter-Thomas School did not detect statistically significant changes during the summer program, but the participants' children had statistically significantly higher Spanish reading test scores and better attendance than did their classmates. In the school-year, courses in English and Spanish leading to the general education diploma (GED) were well received and at least nine members of the community earned diplomas.

IMPLEMENTATION

The summer and school term programs of Project PACT were fully implemented. As in the past, modifications in the plans were made as a result of experience, but the project remained true to the intent of the proposal.

The steps taken to attract participants for the summer program were essentially the same as those used during previous years. An announcement inviting Spanish speaking parents to participate was sent home with pupils, and announcements were made on a Spanish-language radio station. During the afternoon of the second and third days of the summer component, some project staff supplemented these steps with door to door canvassing of potential participants.

Records indicated that the total enrollment was 71 Hispanic parents and that the number who participated in the program on any day varied from 29 (on the first day) to 71. The average number of parents in attendance was 58. The project design called for the payment of a stipend to approximately 50 parents of Potter-Thomas School pupils. Payment records show that during the first week of the program there were 38 of these parents; during the second week, 52; and during the last three weeks, 49. The remaining participants did not receive a stipend although some had children at Potter-Thomas.

The parents were assigned to one of three groups. Each group worked with the curriculum content for a span of two grade levels (Prekindergarten and Kindergarten, Grades 1 and 2, or Grades 3 and 4) for one third of the program. Thus, parents who participated during the entire summer program had an opportunity to work with the curriculum materials of every grade in the school. The parent activities were designed and managed by three teams, each consisting of two curriculum developers. Each team of developers was expert in one of the grade level spans.

The children of the parents participated in learning activities under the supervision of a resource specialist. There was a group of children and a resource specialist for each of the six grade levels of the school. The total number of children present on a given day ranged from 77 to 143 and averaged 120.

The resource specialists organized instructional days which included about an hour of language arts, about an hour of mathematics, and about an hour of social studies activities. The resource specialists were encouraged to use strategies which would be enjoyable for the children and were encouraged to experiment with new instructional approaches. They were permitted to adjust the amount of time devoted to a subject area if an activity required it.

The curriculum developers and the resource specialists planned sessions of about twenty minutes during which the parents observed the instruction of a group of children. Parents were engaged in these sessions two or three times per week. When parents were not observing the instruction of children they were learning about the course of study of pupils at the school or were working on a curriculum packet, a game, or a simple teaching device to be used at home. The school-based activities were supplemented with trips for the parents, trips for children, and trips for both the parents and children which are described in Objective 8 in the next section of this report.

Records showed that 41 parents were in the summer program for the first time in 1979, 22 parents had been in the program during a previous summer, and 8 parents had been in the program during the two previous summers. The school principal reported that some parents who had been in the program during previous summers felt that it should be changed. They had told him that the amount of cutting and pasting involved in making instructional materials should be reduced and the emphais on the development of concepts should be increased.

The school year program began on October 10, 1979 and continued through June 18, 1980. GED high school equivalency courses in English and Spanish were conducted on Mondays and Wednesdays. An afternoon session and an evening session were conducted in each language. Two English language arts courses were conducted, one on Tuesday, Thursday, and Friday afternoons, and the other on Monday and Wednesday evenings. A Spanish language arts course was conducted on Tuesday, Thursday, and Friday afternoons. All courses were conducted by bilingual resource specialists for adult basic education. The specialist who conducted each course was a native speaker of the language being studied. Information about the number of participants in each class can be found in the discussions of Objective 6 and Objective 7, in the next section.

During monitoring visits to the high-school equivalency classes, evaluators observed that GED manuals in the language of the course were the primary instructional tools. Although work was done in most of the various subject areas of the GED examinations during the typical class, as the date of a particular subtest approached, more emphasis was placed on its content. Mimeographed materials prepared by, or obtained by, the resource specialist frequently supplemented the GED manual at these times. Participants were expected to read material and to work on exercises at home. During the classes, the specialists used lecture techniques, gave participants opportunities to work on exercises, and then reviewed the answers to the exercises. Within each class most participants worked on the same materials at about the same time. There usually was a small group of people who had missed some sessions or were not able to work through the materials as swiftly as the others. They were given help in a small group. Just before the date of the spring mathematics subtest of the GED exam, both the English and the Spanish GED groups were combined, and a bilingual program coordinator reviewed mathematics problems.

The language arts classes served adults who differed in their knowledge of the target language. Participants ranged from people who were learning the language for the first time to people who were reviewing skills in their native language. Overall, the instructional content was simpler than the language arts skills taught in the GED classes. Within the classes, there were many small subgroups. When the content involved speaking and understanding the language, the subgroups worked together. When reading, writing, and grammar were taught, the classes usually worked in subgroups. Oral-aural instruction was used extensively. Written materials were usually presented on mimeographed work-sheets. The English classes also used an English-as-a-second-language text.

Curriculum development activities for the school year program were changed substantially from those of previous years. Rather than involving parents in the development of new curriculum packets, the resource specialists devoted their efforts to completing materials begun with the parents during previous years. Beginning on January 21, the specialists met at the school district's Multilingual Instructional Resource Center, two afternoons per week. They worked under the supervision of the bilingual curriculum coordinator of the school district and completed packets such as: "The Magic House," to teach discrimination of initial sounds (Spanish), and "The Vowel Game," to teach distinctions among the sounds of Spanish. More information about this curriculum development can be found under Objective 5.

As part of the school year program, a series of workshops was held during the spring. The workshops differed from those of previous years in that they were scheduled so that both participants of the school year program and non-participating Potter-Thomas School parents could attend them easily. The programs were often presented in the afternoon and the evening and in Spanish and English versions (See Objective 4).

During the spring of 1980, four trips were conducted under project auspices for Potter-Thomas School parents and participants in the school year program. The longest trip, to New York City, took a full day. It focused on the United Nations and included a drive around Manhattan. A list of all the trips, and the number of people who went on them can be found in the discussion of Objective 8.

OBJECTIVES

Objective 1: To increase parents' information about bilingual programs. By the end of the 1979 summer program, parents will know that bilingual education includes instruction in mathematics, science, and social studies in two languages, English and Spanish; that it includes instruction in reading, writing, and speaking in the two languages; and that it includes study of the history and culture of Puerto Rico and mainland United States.

The objective has been analyzed in different ways over the three years of the program, as the evaluators became more familiar with the initial levels of parent knowledge about bilingual education. In past years, a true-false questionnaire showed that summer program participants knew most of the essential facts listed in the objective before the program began.

After consultation with program management, it was decided to shift the emphasis from knowledge about the bilingual program to knowledge of specific things which parents could do to help their children. Previous evaluations reported that parents learned how to involve their children in learning activities at home.

For the current evaluation, parents were interviewed at the end of the summer project. Most parents reported learning about ways to help their children with reading and arithmetic, but less than half the parents reported learning how to help their children with social studies skills. Thus, this objective was considered partially attained.

An equiprobability sample of parents was drawn one week before the end of the summer program. It consisted of 26 parents. Twenty three of the parents (88.4% of the sample) were interviewed in Spanish during the last three days of the summer program by the Spanish-speaking member of the evaluation team. The first question of the interview asked parents whether they had learned things they could do outside the school to help their child with reading. Every interviewee stated that they had. When the researcher probed by asking about the things they could do, six parents could not answer the question satisfactorily (e.g., I do not remember, a little of everything) and three parents' responses lacked specificity (e.g., how to teach children at home). The remaining parents mentioned one or more skills having to do with reading (eleven parents) and/or writing (nine parents) in Spanish. Reading elements mentioned were the alphabet, vocabulary, synonyms, homonyms, word-object matches, word definitions, and poetry. Writing elements mentioned were Spanish grammar, "better writing," using accents, writing sentences, spelling, and verbs. When asked if they had tried any reading activities at home, twenty parents said they had tried some things, but only 12 were able to describe what they had done. One parent said "No," and one said that she could not remember what she had tried at home.

All but one of the interviewed parents reported learning things that could be done outside of school to help their children master arithmetic. When asked what had been learned, the parents cited the mathematical operations (addition, subtraction, multiplication and division), place value concepts, "numbers," geometry, using objects to teach concepts, measurement (rulers, volumes, etc.), the idea of devising problems for children at home, and using a bingo game the parents had made in class. Two parents said they had learned things but could not specify what, and two parents did not try to answer the question. When parents were asked what they had used at home, seventeen reported that they had used something from the program, and fifteen of these were able to describe at least one activity they had engaged in.

When asked if they learned some things which they could use to help their children learn about the community, geography, or history, eleven of the parents said that they had. Parents said they learned to use a map and mentioned taking trips, learning the capitals of states, and "information on the blackboard." Five of these reported that they had actually involved their children in social studies activities outside of school.

Objective 2: To improve reading achievement in English and Spanish of LEP pupils whose parents participate in Project PACT. Measuring instruments will be the Stanford Achievement Tests of Reading and the Inter-American Test of Reading in Spanish. The level of achievement in reading is defined as improved when there are statistically significant ($p<.10$) relationships between reading scores and parent participation in the program. The effects of grade, length of residence on the U.S. Mainland, and years of attendance at the Potter-Thomas School will be controlled statistically.

This objective was considered partially attained after the analyses were altered slightly. There was systematic evidence that parent participation in the program during the summer of 1977 was associated with better reading scores in both Spanish and English. Parent participation at other sessions of the program was not systematically related to improvement of test scores.

When preliminary analyses yielded inconsistent results for the four reading scores (Stanford Vocabulary, Stanford Reading Comprehension, Stanford Word Study Skills, and the Inter-American Test of Reading in Spanish) evaluators used a step-wise regression procedure to further examine the data. The analyses presented are a result of the exploratory process using this technique. The resulting models of pupil performance explained between 28 and 44 percent of the variance.

Pupils in grades 2 through 4 were tested in English. The results are shown in Table 1.

Grade was controlled statistically through the use of the closely related variable, age. The effect of age was found to be complex and a step-function was used to control for curvilinear effects. The first variable in Table 1 shows the regression weight for 7 year olds, the next for 8 year olds, up to pupils who were 12 years old at the time of the test. Thus age was controlled by computing the rate of growth per year of pupils seven through twelve years old.

The effects of sex, test form, and birth place (Puerto Rico or elsewhere) were controlled through the use of "yes-no" type coded variables. The pupils' knowledge of English was controlled through the use of the pupils' ESOL level score (1 = Beginning, 2 = Intermediate, 3= Advanced, 4 = No ESOL service).

Six variables (coded zero for no and one for yes) were used to describe the effects of parents' participation on pupils' scores in each of the three school-year and three summer components.

Examination of the participation variables' relation to pupils' scores showed that participation in the summer of 1977 was statistically significantly related to better pupil performance in vocabulary and reading comprehension, but not in word study skills. The vocabulary regression weight for that program is 2.87 ($p<.06$); and the comprehension weight is 12.73 ($p<.01$).

Children of parents who participated in the 1978-79 school year scored significantly worse than their peers in the vocabulary subtest (regression weight = -2.81, ($p<.10$). Children of participants in the 1977-78 school year scored significantly worse in reading comprehension (regression weight = -8.19, $p<.10$).

Table 2 shows the analysis of the Spanish test scores. Pupils in grades one through four were tested. With background variables held statistically constant, the effects of parent participation of Project PACT were examined, using the same type of model as was used with English scores. Once again, pupils whose parents participated in the summer of 1977, have statistically significantly higher reading scores. The regression weight was 6.45 ($p<.09$).

The English and the Spanish test scores suggest that children whose parents participated during the summer of 1977 scored systematically higher than chance. Of the remaining weights, two are significant, but this may be due to the large number of tests of significance.

In assessing the effects of summer and school year participation by parents, the evaluators are aware of the difficulties of trying to draw unambiguous conclusions. Due to the need to link up the children at Potter-Thomas with program participation of parents, the relatively small number of pupils available for the analyses, and the small number of pupils in the analyses whose parents participated in any given program, there are severe limitations in the data. Moreover, the possibility that significance is due to self-selection of participants, rather than the effects of the program, cannot be ignored. The evaluators conclude that there seems to be a significant positive effect in English and Spanish reading associated with participation with the first session, in the summer of 1977. This may be due to the latency of the program, and there is some weak evidence suggesting that the program benefits are real and long-term: the effect of small increments for each year that has elapsed since exposure to the program began.

Objective 3: To improve the attendance of pupils whose parents participate in Project PACT to a statistically significant ($p<.10$) degree. The average daily attendance of children of participating parents will be compared to the attendance of other pupils of Potter-Thomas School who are in the same grade.

This objective was not attained, but the attendance was high (91.3%) regardless of whether parents participated or not.

Attendance data were analyzed using a regression model similar to that used for Objective 2. The results are shown in Table 3. A step-function was used to control for the effect on attendance of age, a variable closely related to grade. The effects of the sex of the pupils and of their birth place were controlled statistically by dummy variables. Differences in pupils' knowledge of English were statistically controlled with the four-value ESOL level variable. Parent participation was then analyzed using six dummy variables, to represent participation in the three school year programs and the three summer programs (1 = yes, 0 = no). The model explained 14% of the variance of attendance, and none of the weights was significant at the criterion level stated in the objective.

Of passing interest is the regression weight of 5.88 for parent participation in the school year of 1978. The probability for this weight is close to the level of significance ($p< .11$) and provides an indication that children of participants in that program attended school an average of 6 days more than did other pupils.

To include as many cases as possible in the analysis of attendance, a prorated estimate of the number of days a pupil would have been present for the entire year was used in the analysis when the pupil was enrolled for only part of the year. The evaluation of attendance was confined to grades 1-3 because records of fourth grade pupils were sent to other schools before year end.

The attendance data suffer from the limitations described for the test data of Objective 2. The relatively small number of cases in the analysis and the relatively low percentage of variance explained by the regression model suggest that weak relationships between parent participation and attendance may have gone undetected. The problem may have been confounded by the high average attendance and the collinearities among the variables.

Objective 4: To provide six workshops dealing with the history and culture of Puerto Rico, family relations, domestic arts, nutrition, consumer education or drug addiction.

This objective was attained. Substitutions were made for five of the six subject areas because the material had been covered previously.

In 1979-1980 the workshops were held while school-year classes for adults were in session. Participants in these classes would go to a workshop in lieu of attending a class. Program announcements were sent home with the children of the Potter-Thomas School in order to attract parents who were not participating in the school-year program. The project coordinator estimated the attendance at the workshops conducted in Spanish as ranging between 100 and 150 people. He reported that about 50 people attended the workshops in English.

Two workshops, one in the afternoon and one in the evening, were conducted by staff of the Philadelphia Electric Company. The topic of the workshops was the conservation of energy resources in the home. The workshops were held in Spanish.

The Neighborhood Youth Corps conducted two evening workshops, one in Spanish and one in English. The subject of the programs was work opportunities for young adults, how they should go about seeking work, and how the Youth Corps motivates young adults to seek work.

The Philadelphia Chapter of the Puerto Rican Forum conducted two evening programs, one in English and one in Spanish. The content dealt with finding a job: looking for work, writing a resume, and being interviewed.

The American Cancer Society presented two series of three programs each. One was held during the morning, the other during the evening. They were conducted in Spanish. The series focused on cancer prevention and ways to obtain medical advice.

The Philadelphia Community College's Office of Bilingual Education conducted three evening programs in Spanish. The aim of the program was to tell participants about opportunities for Spanish-speaking and bilingual people in college, how to apply to the college, and how to choose courses.

One evening program was conducted by LULAC (League of United Latin-American Citizens). The program focused on the seeking of financial aid for higher education. Some people present gave the organization representative their names and filled out application forms.

The program conducted by the Philadelphia Electric Company dealt with an area of domestic arts. The remaining programs focused on the uses to which school year program participants could put their new educational status or broadened parents' understanding of the educational and career options open to their children.

Objective 5: To enable parents to interact with teachers through classroom visitations-- daily in the summer, two to three times during the year--and through creation, by parents and resource specialists, of learning packets to be used at home with children. These packets will include a variety of activities to reinforce learning such as individual vocabulary files, picture cards, mathematical games, and mnemonic devices.

This objective was partly attained. It describes two diverse goals which are reported separately.

Parents' interaction with teachers. During the summer program, parents had daily contact with the resource specialists (who instructed them about the ways they could create a home environment conducive to higher levels of pupil achievement) and observed children receiving instruction, not daily as stated in the objective, but one or two times per week.

During the school year, there were no events designed to have PACT summer program participants observe classes, and there were no parent sessions with curriculum developers. Thus, the goal of having parents interact with teachers was attained for the summer, but not for the school year.

Curriculum development. During the first two years of the project, curriculum developers and parents designed curriculum packets to be used by parents at home. In the summer component, some packets were made by parents under the supervision of the developers. Many other packets were designed, but not readied for dissemination.

In 1979-80, the school year efforts of the curriculum developers were devoted to preparing diagrams and written instructions to be included in the packets. From February to April, 1980, the developers met at the Multilingual Instructional Resource Center of the School District. Three sets of instructional packets were worked on--one for prekindergarten and kindergarten, one for grades one and two, and one for grades three and four. When completed, each set is expected to contain about ten language arts packets, fifteen mathematics packets, and five social studies packets.

The packets are expected to be printed by September, 1981. At that time, dissemination of packets to parents during the school year should begin.

Thus, in 1979-1980 the objective of having parents work on the development of curriculum packets was partially attained. During the summer, parents made and took home curriculum packets. During the school year, some packets were readied for publication by curriculum developers. Other packets must still be completed. None of the packets has been published.

Objective 6: To provide courses during the day and/or the evening during the school year in order to teach communication skills in English and in Spanish. At least 15 parents will be enrolled in each course.

This objective was partly attained. Two sessions of English and one session of Spanish instruction were conducted. Thirty nine or more people enrolled in each course of study, but fewer than 15 reported being parents of Potter-Thomas pupils.

The courses were begun during the first week of October. An English class was conducted during the afternoons. It had a total enrollment of 48 people, according to the roll book kept by the adult basic education specialist in charge. The average attendance in this class on the five days that it was monitored was 12 adults. This class met three times per week.

A second English class met twice a week, in the evening. The roll book listed 55 participants. The average observed attendance during two monitoring visits was 26.5 adults.

The participants in the English classes were nearly all Hispanic, and techniques geared to people learning English as a second language were used with most participants.

The Spanish course was held during the afternoon and met three times per week. The record kept by the adult education specialist indicated that 39 people were enrolled. During four monitoring visits, an average attendance of 25 people was observed.

One fifth of the people present during the monitoring of the Spanish class were English dominant. The remainder were Hispanic adults who were improving language arts skills in the mother tongue.

During all visits to the language arts classes, the observer noticed that the classes were divided into groups for part of the instruction. The groups were based on the degree that the adults knew the target language.

Project information forms were completed by participants when they entered the program. One person in the Spanish class and 11 people in the English classes recorded having children attending Potter-Thomas.

During past years, it was noted that the English language arts course was often taken in conjunction with the GED course in Spanish. Comparison of roll books indicated that nine people were studying this combination in 1979-1980.

Objective 7: To provide courses in basic education in English and in Spanish leading to an English or a Spanish GED diploma. At least 15 parents will pass one subtest from the GED examinations.

This objective was considered attained. Fifteen parents of Potter-Thomas School pupils took one or more of the GED subtests examination, and 14 passed at least one. A total of 103 adults (parents and other community members) took the examination, and 35 earned a GED high school diploma.

Four GED classes were conducted in the school year, two in English and two in Spanish. One class in each language was held during the afternoon, and the other, in the evening. According to the roll books maintained by the adult basic education specialists, the enrollments in the classes were as follows: afternoon Spanish, 46 participants; afternoon English, 22 participants; evening Spanish, 53 participants; evening English, 60 participants.

The GED examinations in English and in Spanish are administered periodically by the Measurement and Research Center of Temple University. For this report, records of participants who took one or more parts of the examinations at the center between June, 1979 and June, 1980 were reviewed. People who were tested during the summer of 1979 were in classes during the 1978-1979 school year. Those tested later were in the program, during 1979-1980.

The report prepared by the Center showed that 103 people had been tested during the thirteen month interval. By matching names and Social Security numbers of people who were tested with those on the information forms which were to be completed by project participants, evaluators identified 15 examinees who had children who were attending the Potter-Thomas School. As a third of the examination records could not be matched with project information forms, the number of participants who were parents was probably underestimated.

Objective 8: To take parents and children on various field trips to cultural and historic sites.

This objective was attained. Six different trips were part of the summer program. Four trips were conducted during the school year.

During the summer program, parents and children visited Valley Forge and took a boat ride on the Delaware River. Parents took a walking tour of the historical area of Philadelphia and visited the Philadelphia Museum of Art. Children went to the zoo and saw a production of a play, "Cinderella," at the Playhouse in the Park.

As part of the end-of-the-summer interviews (see Objective 7) parents were asked about the trips on which they went. Of the 23 parents who were interviewed, 21 reported that they went on the walking tour of the historical area of the city, and 21 went to the art museum. All 23 stated that they went on the boat trip. Twelve stated that they had visited Valley Forge at the time of the interview, but a group of parents and children were scheduled to visit Valley Forge after the interviews.

All but one of the parents who went on the walking tour could describe something about one or more of its aspects. The place mentioned most often was the U.S. Mint. Other things mentioned, in decending order of frequency, were old houses and streets, a church, the Betsy Ross House, the Fireman's Museum and books about old Philadelphia. All but one of the parents who went to the art museum were able to describe some type of exhibit. The one remembered most frequently was the Japanese Tea House. Paintings were mentioned next most often. The following were mentioned by one to three people: antiques, religious art, sculpture, tapestries, an Indian temple, and "pretty things". One person said that the museum was not interesting.

The boat trip engendered responses that were different in quality from the other trips of the summer program. Five parents alluded to sights visible from the boat. The remaining responses had to do with reactions to being on the boat, children's reactions to being on a boat, and the enjoyment of the ride. One parent stated that the trip was not interesting, and one parent did not answer the question about the trip.

Only half of the interviewees had been on the Valley Forge trip when they were interviewed. One parent complained that she did not get to see some of the sights on the trip. The other nine interviewees reported that they had learned about some aspect of the lives of the soldiers during the battle that was fought there. The parents were most impressed by the small size of the buildings (8 comments). One to three parents commented about the park area itself, the soldiers' uniforms, the chapel, aspects of how soldiers lived, the history of the park, and a film that was shown.

When asked, as part of the evaluation of Objective 1, if they had learned to help their children with aspects of social studies, half the parents said "No." The content of the parent's answers to questions about the four trips of the summer program indicated that these parents had learned social studies content, but had not learned how to use this knowledge to help children.

During the school year, parents and participants in the language arts and GED courses went on the following trips: The Franklin Institute Science Museum, 76 adults; the Philadelphia Museum of Art, approximately 60 adults, Longwood Gardens, approximately 85 adults; and a full day bus trip to New York City, 71 adults. The numbers of participants on each trip were estimated from fees paid for admissions. These numbers include the project staff members who helped conduct the trip.

SUMMARY AND CONCLUSIONS

Project PACT consists of two major components, a summer program designed to teach Hispanic parents how to complement the bilingual education their children receive at Potter-Thomas school and a school year program geared to teaching basic skills to adults of the Potter-Thomas community. The school year program includes supplementary workshops, and both programs include educational trips.

Analyses of the performance of children of parents who have ever participated in the program suggest that the Summer 1977 component has had a statistically significant effect on pupils' ability to read English and Spanish. Although this may be the result of the caliber of participants attracted the first time the program was offered, it may also be due to the program having long-term cumulative effects, rather than a one-time boost. The effect of parent participation on the attendance of their children was not discernible to a statistically significant degree.

In the 1979 summer program, parents reported that they had learned how to help their children. They had frequent contact with teachers who serve as resource specialists, made curriculum packets which they could take home, participated in trips, and observed the instruction of children.

During the 1979-1980 school year program, parents and other members of the community attended English and Spanish language classes and classes conducted in English or Spanish leading to the high school equivalency degree. Over one hundred people took the examinations, and thirty five earned the degree. Workshops were conducted by six different agencies on topics ranging from energy conservation to career opportunities. The program coordinator reported that these sessions were attended by from fifty to one hundred fifty people.

Curriculum developers edited and completed packets that had been designed during the previous years of the program, with the goal of disseminating them by the fall of 1981. Four trips were conducted for participants during the school year.

Evaluation of the project has made it evident that the project has evolved beyond the original proposal. Although the program was designed for Potter-Thomas parents, they comprise only a minority of the school year program participants. One objective describes teaching summer program participants facts about the bilingual school; in fact the program goes further, teaching parents how to help children master school work. Another objective calls for curriculum development activities during which parents and teachers work together; actually, during the school year, teachers readied materials by themselves. For these reasons, evaluators believe that project objectives should be reviewed, and, in some cases, revised to reflect the development of the program.

Since similar results have been found in earlier evaluations of the first two years of the program, the evaluators conclude that the program has had a measureable effect on the behavior of school children in the important skills of reading in Spanish and English and has improved the academic achievement of program participants.

TABLE 1

Analysis of Stanford Achievement Raw Scores

Source of Variance	Vocabulary Weight	P<	Comprehension Weight	P<	Word Study Weight	P<
Age:						
7	-1.86	.01	4.33	.01	- .66	-
8	-1.55	.01	4.41	.01	- .53	-
9	-1.25	.01	4.33	.01	- .37	-
10	-1.18	.01	4.11	.01	- .45	-
11	- .93	.01	4.77	.01	.04	-
12	- .92	.01	3.66	.01	- .01	-
Sex:	-1.08	-	2.71	-	.03	-
Test Form:	-1.46	-	1.05	-	1.06	-
Birth Place:	- .99	-	6.82	.03	2.18	-
ESOL Level:	1.59	.01	6.37	.01	3.73	.01
Parent Participation:						
School Year 77-78	1.53	-	-8.19	.10	-2.72	-
School Year 78-79	-2.81	.10	-3.72	-	-1.83	-
School Year 79-80	-2.82	-	-2.67	-	- .27	-
Summer 77	2.87	.06	12.73	.02	3.20	-
Summer 78	- .73	-	-1.96	-	-1.20	-
Summer 79	- .09	-	2.83	-	.68	-
Number of Observations	157		148		161	
Multiple R^2	.31		.40		.28	

TABLE 2

Analysis of Inter American Spanish Reading Scores

Source of Variance		Weight	Probability (P<)
Age:			
6		2.09	-
7		3.32	-
8		3.83	-
9		3.72	-
10		2.97	-
11		3.73	-
12		3.15	-
Sex:		4.85	.02
Birth Place:		1.76	-
ESOL Level:		4.93	.01
Parent Participation:			
School Year	77-78	-4.58	-
School Year	78-79	1.85	-
School Year	79-80	-2.85	-
Summer	77	6.45	.09
Summer	78	2.33	-
Summer	79	.70	-
Numberof observations		249	
Multiple R^2		.44	

TABLE 3

Analysis of Pupils Attendance

Source of Variance	Weight	Probability (P<)
Age:		
6	-1.41	-
7	-1.03	-
8	-0.28	-
9	-0.54	-
10	0.38	-
11	-0.64	-
12	0.26	-
Sex:	2.25	-
Birth Place:	1.30	-
ESOL Level:	-0.15	-
Parent Participation:		
School Year 77-78	1.66	-
School Year 78-79	5.89	-
School Year 79-80	0.22	-
Summer 77	3.06	-
Summer 78	-2.85	-
Summer 79	2.88	-
Numer of observations	249	
Multiple R^2	.14	

DIVISION OF FEDERAL EVALUATION RESOURCE SERVICES

PROJECT PACT
Parents and Children Together

Evaluation of the Fourth Year
1980-1981

Report No. 8260

OFFICE OF RESEARCH, PLANNING AND EVALUATION

THE SCHOOL DISTRICT OF PHILADELPHIA

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PROJECT PACT
Parents and Children Together

EVALUATION OF THE FOURTH YEAR
1980-1981

Report No. 8260

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THE SCHOOL DISTRICT OF PHILADELPHIA

OFFICE OF RESEARCH, PLANNING AND EVALUATION
Federal Evaluation Resource Services

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EXECUTIVE SUMMARY

Project PACT (Parents and Children Together) was designed to complement the Let's Be Amigos bilingual program at the Potter-Thomas School by involving Hispanic parents in the education of their children. During the summer, Spanish-speaking parents prepared curriculum packets under the supervision of curriculum developers and observed the instruction of children. During the school year, Spanish and English language arts classes and General Education Development (GED) courses in the two languages were provided for adults in the community. Workshops were conducted in both the summer and school year programs.

A comparison of interview protocols from the beginning and the end of the summer showed that parents had learned new material about the ways they could help their children at home with reading, mathematics, and social studies. The Hispanic pupils' scores on published tests administered in the spring showed that parents' participation during any of the summer programs had a long-term, beneficial effect on the Spanish and English reading skills of their children. Parents' participation during the summer programs also had a positive effect on their children's attendance. The effects of parent participation in the summer programs were cumulative; that is children whose parents participated more than once had, on average, higher scores and better attendance than children whose parents participated only one time.

The number of school-year program participants was several times the minimum number specified by the objectives about language arts and GED classes, and forty-three participants earned the GED. Objectives describing curriculum development, parent-teacher interaction, and field trips were attained. An objective describing the provision of workshops was partially attained, as there were two less workshops than specified. As the 1980-81 funding year drew to an end, work on three volumes of curriculum packets had been completed, and printing of the volumes during the fall of 1981 had been scheduled.

PROJECT PACT

INTRODUCTION

Project PACT (Parents and Children Together) complemented the Let's Be Amigos bilingual program at the Potter-Thomas School. The major activities of the project were: teaching parents about school operation and curriculum, showing parents activities that they could use at home to reinforce their children's classroom instruction, acquainting parents with the cultural resources of Philadelphia and neighboring cities, and teaching basic skills to adults of the school community. As a result of these activities parents were expected to acquire new skills and their children's performance in school was expected to improve.

The project was composed of two major programs. The summer program served parents of Hispanic children who attended or were about to attend Potter-Thomas School. The parents learned about the school curriculum and about the things they could do to help their children master their school work. Children of the local community participated in classes which were observed by the parents. Parents and children went on trips to cultural and recreational sites.

The school-year program served parents and other adults of the local community. It included high school equivalency classes, language arts classes in Spanish and English, workshops, trips and curriculum development.

RATIONALE

The Potter-Thomas School was selected as the project site because its LEA-supported bilingual maintenance program enables all children to develop competence in English and in Spanish. Project PACT included some components taught in English and others in Spanish, paralleling the language instruction pattern of the school.

In the community served by the Potter-Thomas School, many adults are in-migrant from Puerto Rico. Many adults lack basic academic skills. They are unaware of the resources in the community and the city, and are unable to reinforce at home the concepts taught in school. In order to help parents become resources for their children, the parents participated in academic and cultural activities and also acquired practical knowledge about health and family problems.

PREVIOUS FINDINGS

1979-80: Analyses of tests given in the spring showed that Potter-Thomas School pupils whose parents had participated in the Summer 1977 Program had statistically significantly higher Spanish and English reading scores than did other, equivalent pupils in the school. Although this may have been due to the caliber of the parents attracted to the program in 1977, the first year it was offered, it may also have been due to the program's having a long-term effect. Analyses of attendance data failed to show a significant effect.

The parents who participated in the project during the summer of 1979 were able to describe a variety of ways they had learned to help their children with school work. During the school year, over 100 people took the examinations for,

and 35 earned, the GED high school equivalency diploma. Objectives regarding workshops and field trips were attained. Other objectives regarding parent education, and curriculum development during the school year were partially attained.

1978-1979: Parental participation in the summer component was associated with pupils having statistically significantly higher scores on measures of language arts mastery in Spanish and in English when background characteristics of pupils were controlled. When the characteristics were controlled, the difference between the attendance of children of participants and other similar children was not statistically significant.

The analysis of parent interviews conducted during the summer program revealed a statistically significant gain in participants' knowledge of ways to help children with school work. Thirty school-year program participants earned GED high-school equivalency diplomas, and the program goals regarding workshops and field trips were met. Instructional packets to enable parents to help their children master school work were written during the school year, but required editing before they could be given to parents.

1977-1978: During the first program year, a true-false test designed to measure parents' acquisition of information about the Potter-Thomas School failed to detect statistically significant changes for the summer program. During the 1977-78 school year, the summer program participants' children had statistically significantly higher Spanish reading test scores and better attendance than did their classmates. In the school-year program, courses in English and Spanish leading to the GED were well received, and at least nine members of the community earned diplomas.

IMPLEMENTATION

THE SUMMER PROGRAM

The summer program was fully implemented. A five-week program was conducted for Spanish-speaking parents of Potter-Thomas pupils and children of the local community during the month of July. Participants for the program were recruited by notices sent home with Potter-Thomas School pupils, by an announcement made on a Spanish-language radio program, and by home visits.

Documents indicated that the attendance of parents ranged from 32 to 50 people, and averaged 43; the attendance of children ranged from 52 to 80 and averaged 68. These figures represent a small reduction in parent participation and a 40% reduction in the number of children from the previous year. The enrollment of parents, who were paid a stipend, was maintained at about 50 people, but, as is frequently the case in adult education, there were a few parents who left the program before it was over. The vacancies that were created were filled, and a total of 55 different parents were paid project stipends during the summer.

The parents were assigned to one of three groups. During the course of the summer program each group covered elements of the kindergarten through fourth-grade curriculum of three subject areas in Spanish: mathematics, reading skills, and writing skills. A team of two curriculum developers specialized in each of the subject areas. The teams of developers rotated among the parent groups, giving each group an opportunity to concentrate on one of the subject areas for about one-third of the program, or about eight days.

During the prior summers, each curriculum developer concentrated on a grade-level span and attempted to include a variety of subject areas appropriate to it. This pattern was changed in 1980 because the curriculum developers felt that subject-based teams would make more effective use of the developers' interests and skills. It was also felt that the new pattern would create variety that would appeal to the 18 parents who had participated in the summer component in the past. The new pattern appeared to be an improvement to the evaluators because it eliminated instances of some parents' examining the elements of a subject out of the sequence in which they are usually learned; e.g., fourth-grade arithmetic before first grade arithmetic.

Six groups of children, organized by grade level, participated in the summer component. A resource specialist supervised each group. As in the past, mathematics, language arts, and social studies were taught, with emphasis on instructional strategies that had game elements. The activities for the younger children were primarily in Spanish, while those for the older children made more use of English, mirroring the language pattern of the Potter-Thomas school year program for Spanish-dominant children.

As in prior summers, parents had an opportunity to observe the resource specialists teaching the groups of children and to discuss the ways that the children reacted to the various activities with the project personnel.

Three trips were conducted as part of the summer program. Parents went to the Philadelphia Museum of Art, children went to the Franklin Institute, and both parents and children went to the Philadelphia Zoo. The discussions of Objectives 5 and 8, in the following section, contain more information about parent-teacher contact and about the trips conducted during the summer.

THE SCHOOL-YEAR PROGRAM

The 1980-81 school year program began in November, shortly after the delayed opening of the Philadelphia public schools, and continued to the end of June. The program of GED and language arts courses that was conducted the previous year was repeated. Three sessions of English language arts were offered: two sessions met for two evenings per week, the third met on three afternoons. A Spanish language arts class met two afternoons each week. There were four General Education Development (GED) high school equivalency classes: afternoon Spanish, evening Spanish, afternoon English, and evening English. The GED classes each met twice a week.

A new feature in 1980-81 was tutorial classes for participants in the GED and language arts classes, in which people who were falling behind or failed to grasp a concept could obtain individual help. The Spanish tutorial session was conducted one afternoon and one evening each week. The English tutorial session was conducted on two evenings.

All the courses were conducted by bilingual resource specialists for adult basic education. The specialists assigned to the various classes were native speakers of the courses' target languages. Additional information about the GED and language arts classes can be found in the discussions of Objectives 6 and 7.

Four trips and four workshops were conducted for school-year program participants. All took place in the spring. The personnel who conducted them were bilingual, but, as the majority of the participants was Hispanic, the use of the Spanish language tended to predominate in the activities that were observed. The workshops were held on school-day afternoons, and the trips, with the exception of an evening ballet performance, were held on school days. Additional information about the workshops and the trips can be found in the evaluation of Objectives 4 and 8.

Eleven classes and activities of the school-year component were monitored. During visits to the high school equivalency classes, evaluators observed that Spanish and English GED manuals provided by the project were the primary instructional tools. Mimeographed materials prepared by, or obtained by, the resource specialist frequently supplemented the GED manual.

Participants were expected to read materials and to work on exercises at home. During the classes, the specialists used lecture techniques, gave participants opportunities to work on exercises, and then reviewed the answers to the exercises. Within each class, most participants worked on the same materials at about the same time. Although some work was done in each of the various subject areas of the GED examination during the typical class, as the date of a particular subtest approached, more emphasis was placed on its content. The instruction of people who were behind the majority of the class was supplemented through the tutorial classes, and separate "catch-up groups" were no longer observed during the regular GED sessions.

The language arts classes served adults who were heterogeneous in their knowledge of the target language. They ranged from people who were learning the language for the first time to people who were reviewing skills in their native language. Overall, the instructional content was simpler than the language arts skills taught in the GED classes. Within the classes, there were many subgroups.

When the content involved speaking and understanding the language, the subgroups worked together. When reading, writing and grammar were taught, the subgroups often worked separately. Written materials were usually presented on mimeographed worksheets. The English classes also used an English-as-a-second-language text. From time to time, participants who needed extra help or had been absent made use of the tutorial sessions.

During the school year, the curriculum coordinator and media specialist of the school district's Multi-lingual Instructional Resources Center prepared the curriculum materials that had been developed during previous program years for publication. The materials, which are in Spanish, and are for the use of the parents, are in the form of curriculum packets. They are being published in three volumes. A description of their contents, organization, and status as of the end of the grant year can be found in the evaluation of Objective 5.

ATTAINMENT OF OBJECTIVES

Objective 1: By the end of the summer, parents will be better able to describe ways they can help their children with school work in mathematics and reading, and will be able to describe community resources they can visit with their children.

This objective was attained. During the first and last weeks of the summer, parents were interviewed about the ways they could help their children with reading, mathematics, and social studies, and about the degree that they had tried these activities. A comparison of the interviews conducted on the two occasions showed that there was a statistically significant increase in parents' knowledge and reported activities ($p<.01$).

The summer component participants were interviewed by a Spanish-speaking project evaluator. Two questions were asked about each of three subject areas: reading, mathematics, and social studies. The parents were asked what they had learned that could be used to help children with each of the subjects and what they had actually done to help their children with them. The parents' answers were recorded during the interview and then rated by a project supervisor and an evaluator. To assure that the ratings of the pre-and-post program questions were independent, each response was transcribed to an index card and was coded as to the interviewee and whether it was from the first or last week of the summer component. The index cards containing the answer to each question that were from the beginning and the end of the program were shuffled and then given to one of three raters. They rated the responses on the cards according to a four-value scale, with high values indicating that the response contained information that was to have been conveyed in the classroom sessions on the trips. The ratings of each parent's answers were then sorted out and the "pre" and the "post" total scores were computed for each parent.

Fifty-one interviews were conducted at the beginning of the summer component, and 33 at the end. Thirty people were interviewed on both occasions. Of these 77% showed improved ratings, 17% declined and 6% remained the same. A sign test indicated that the improvement was not likely to be chance ($z=3.21$, $p<.01$).

One concern with a program such as this, in which parents may participate more than once, is that no growth will be found among repeat participants. Of the 18 parents who were in the summer program two or more times, 12 improved. However, the amount of their improvement was much smaller than that of first time participants, less than two points as compared to about seven and one half points for the first-time participants. The difference in improvement of the groups was primarily due to higher scores at the beginning of the summer for those who had been in the program before, as expected.

Objective 2: To improve the reading achievement, in English and in Spanish, of the limited English proficiency pupils whose parents participate in Project PACT. Measuring instruments will be the Stanford Achievement Test in reading, in English and the Inter-American Test in reading in Spanish. The level of achievement in reading is defined as improved when there is a statistically significant ($p<.10$) relationship between reading score and parent participation in the program when pupil background variables are controlled statistically.

In 1978-1979 the project director indicated that this objective referred to children whose parents participated in the summer, rather than the school year, component (Report 8037).

The objective was attained. Pupils whose parents participated in the summer program had statistically significantly higher English and Spanish reading scores than the children of non-participants when the pupils' age, pretest score and test level were held statistically constant ($p<.10$).

For each summer of parent participation, the pupils' English performance was higher by about two and one--half scale score points, and their Spanish performance, by about one and one half raw score points. Evaluators regard these improvements as substantial.

The English performance of 182 limited English proficiency pupils in grades two through four was measured with three subtests, Word Study Skills, Vocabulary, and Reading Comprehension, of the Stanford Achievement Test (Form B) battery. Primary Level I was administered to 113 second and third graders, and Primary Level II was administered to 69 fourth graders.

The analyses held statistically constant the pupils' Age, Pretest Score, and Test Level. Age and Pretest Score were represented by four variables to allow for unequal rates of growth among pupils of differing ages and initial abilities and to allow for missing pretests. Program Participation is the number of years each pupil's parent was in the summer program.

The analysis of Word Study Skills was based on 113 pupils and is presented in Table 1. Program Participation is highly significant ($p<.03$), indicating that after the effects of Age, Test Level and Pretest Score were taken into account, pupils' scale score were an average of 2.86 points higher for each summer that the pupils' parents participated in the program.

The analysis of Vocabulary scores are based on 111 pupils and is presented in Table 2. The effect of Parent Participation was highly significant ($p<.001$). The analysis shows that parent participation in the summer component increased scores at an average rate of 2.69 scale score points per summer.

The analysis of Reading Comprehension is presented in Table 3. If a pupil did not take both parts of the Reading Comprehension test, one part was used to estimate the over all score. The analysis of the 120 pupils' scores showed that the pupils gained about 2.32 points for each summer that parents participated. This gain was statistically significant ($p<.02$).

Level I of the Inter-American Test of Reading was used to measure pupils' Spanish reading skills. The test was administered to 254 limited English proficiency pupils in grades 1-4. The analysis of performance in reading in Spanish is presented in Table 4. As only one test level was used, the variable, Level, does not appear in the analysis. In other respects, the approach was the same as that used to analyze the English reading tests. Parent participation had a statistically significant effect ($p<.06$). Pupils' performance tended to be higher by 1.61 raw score points for each summer of parental participation.

Objective 3: To improve the attendance of pupils whose parents participate in Project PACT to a statistically significant ($p<.10$) degree. The average daily attendance of children participating parents will be compared to the attendance of other pupils of Potter-Thomas School who are in the same grade.

This objective referred to parent participation in the summer component. It was attained. Pupils whose parents participated in the summer program had statistically significantly better attendance than the children of non-participants ($p<.10$) when the pupil's age and previous attendance were held statistically constant. The typical pupil's attendance was two and a half days higher per school year for each summer of parent participation.

The attendance records of 400 Hispanic LEP (limited English proficiency) pupils in grades K-4 at the Potter-Thomas School were reviewed at the end of the school year. Fifty-one pupils were excluded from the analysis because the pupil's age was missing. The analysis of average daily attendance, measured as the ratio of days present to days on roll, is presented in Table 5. The pupil's age and the pupil's attendance the previous year were used to control for the differences among pupils that were not caused by the program. Age was represented by four trends to allow for different attendance rates at different ages, and provision was made for pupils who lacked attendance records. The variable, Program Participation, was highly significant ($p<.01$) and indicated that, for each summer that a pupil's parent participated in the program, attendance was increased by one and one third percent. Since the average daily attendance for all pupils in the sample was 87.6%, evaluators regard the improvement of 1% to 5%, depending on the number of summers, as substantial.

Objective 4: To provide six workshops dealing with history and culture of Puerto Rico, family relations, domestic arts, nutrition, consumer education, drug addiction, or other subjects of interest to parent and school year participants.

This objective was partially attained. Four workshops were conducted for parents and school year participants:

. Cancer Detection - American Cancer Society

. Community Violence - Casa del Carmen, a community service organization

. Government - Hon. Nelson Diaz, Judge, Common Pleas Court

. Educational Opportunities - The Philadelphia Education Center of LULAC (League of United Latin American Citizens)

The workshops were conducted as part of the afternoon adult education program and were substituted for part of the GED or language arts classes in session. Evaluators' observations suggested that most of the people present for these classes (about 40 people) went to the workshops. A few people not in the classes, who seemed to be friends or spouses of class members, also attended the workshops, but there was no systematic effort to attract Potter-Thomas school pupils' parents who were not participating in the adult education program. Thus, the workshops were not a school-wide activity.

The workshops were all conducted by bilingual personnel. In keeping with the language preference of the majority, Spanish tended to dominate the verbal interaction, but provision was made for the English-speaking people in attendance through the paraphrasing into English of what had been said in Spanish.

Objective 5: To enable parents to interact with teachers through classroom visitation and through the creation, by parents and resource specialists, of learning packets to be used at home with children. These packets will include a variety of activities to reinforce learning, such as individual vocabulary files, picture cards, mathematical games, mnemonic devices.

This objective was attained. It describes two diverse goals which are reported separately.

Parents' Interactions with Teachers. During the summer component, parents had the opportunity to work with twelve different Potter-Thomas School teachers. Six teachers served as curriculum developers and led the parent groups described in the implementation section. As a result of the rotation of curriculum developers, the parents worked with all the teachers who served in this role. Six other Potter-Thomas school teachers served as resource specialists, each of whom worked with children of a given grade level in the summer program. The parents observed children being taught by the resource specialists about once a week, giving them an opportunity to observe classroom instruction.

Curriculum Development. In the summer session, during part of the day, the parents and curriculum developers worked on the construction of learning packets. The content of the packets were activities in mathematics, language arts, and reading. The educational concepts embodied in the packets were discussed with the parents before the construction was undertaken.

The goal of the parents was to construct a game or device to use with their children. The goals of the curriculum developers were to teach the concepts embodied in the devices to the parents, to show them how one device could be adapted to varying levels of difficulty, and to show them how the principle it embodied could be extended to other subject areas. For example, the parents made flash cards to teach reading vocabulary and then discussed how another set could be made for arithmetic.

During the following school year, the objectives, plans and diagrams for the various instructional packets that had been made by parents or designed by teachers over the years were reviewed and edited. Illustrations were added and, by June, 1981, the texts were ready to be sent to the printers.

The final version called Aprendamos en el hogar, (Let's Learn at Home) is being published in three volumes, for prekindergarten and kindergarten, for grades 1 and 2, and for grades 3 and 4. Subjects covered are language arts, mathematics, and social studies.

Some examples of the content are "Rompecabezas geométricos" (Geometric Puzzles), an activity for the kindergarten level, in which parents are shown how to make a shape puzzle from a paper plate; "El diccionario pictorico," a picture dictionary for first and second-grade pupils; "Domino de diptongos," a domino game based on Spanish dipthongs for grades 1 and 2; and "Ubiquémonos en el mapa," an activity to teach third and fourth-grade pupils about the cardinal points of the compass and the map of the United States. The volumes cover a total of 49 topics and describe 98 different activities.

Objective 6: To provide courses during the day and/or evening during the school year, in order to teach communications skills in English and in Spanish. At least 15 participants will enroll in each course.

This objective was attained. There were three sections of the English communications skills course. They served a total of 96 adults. There were two sections of the Spanish communications skills course that served a total of 36 adults.

One section of each language course met during the afternoon. Two sections of the English and one of the Spanish course met during the evenings. All participants in the afternoon Spanish section were Hispanic. The other sections of the language courses served a mixture of native English and native Spanish speakers. To accommodate the diversity of skills in the language sections, at times members of the class were divided into small groups of people working on similar instructional levels.

Objective 7: To provide courses in adult basic education in English and Spanish leading to the GED in English or in Spanish--at least 15 parents will pass one subtest of the GED examination.

This objective was attained. The English and Spanish GED classes met in afternoon and evening sessions. One hundred and one project participants passed one or more subtests of the GED.

A total of 106 project participants tried the GED examinations during the project year July, 1980 to June, 1981, and 95.3% of them passed at least one subtest. Forty-three (40.6% of those trying the tests) earned the diploma.

The total enrollment of the Spanish GED courses was 93 people; that of the English GED courses was 123. In the past, the majority of GED participants elected the Spanish course, therefore these figures represent a change. The evaluators observed that the large size of the English GED enrollment was due to the presence of a substantial number of Hispanic adults who were competent in English, and who chose to take the English GED examinations.

Objective 8: To take parents and their children on various field trips to cultural and historic sites.

The objective was attained. During the summer program parents went to the Philadelphia Museum of Art, children went to the Franklin Institute Science Museum, and both children and parents went to the Philadelphia Zoo. During the school year there were four trips for adults: to the Franklin Institute,

Longwood Gardens, the Art Museum, and a performance of "Copellia" at the Pennsylvania Ballet.

About 65 children went on the two summer trips that included children. An average of 57 parents went on each of the summer trips to the Art Museum and the Zoo. Based on the number of buses filled, about 70 people went on each of the three school year trips. Fifty-five program participants went on the fourth trip, to the ballet.

SUMMARY AND CONCLUSIONS

Project PACT consists of two major components, a summer program designed to teach Hispanic parents how to sustain at home the bilingual education their children receive at the Potter-Thomas School and a school year program designed to teach basic skills to adults of the Potter-Thomas community. The fourth year evaluation showed that the project has been successful in attaining these broad goals. Parents of the summer program acquired the concepts being taught. Children whose parents participated had better Spanish reading scores, English reading scores, and attendance than other Potter-Thomas School pupils.

Analyses in which the achievement and attendance of children of summer component participants were compared to the school's other Spanish-dominant pupils showed that the effect of parent participation was cumulative; that is, children whose parents participated for more than one summer had benefited from each of the summers.

The parent interviews confirmed the findings of the second project year, and the impressions gleaned from "post-only" interviews of the third year: that the summer program is successful in teaching parents about the ways they can enrich the home-learning environment for their children. The examination of data from participants who were in the component for more than one year suggested that information is retained from year to the next.

The school year component has grown far beyond the original expectations of project planners. Compared to the criteria of the objectives, there were five times the number of participants in the language arts classes and more than six times the number of participants who met the GED examination criterion. In fact, nearly three times more people earned the GED diploma than program planners thought would pass one of its subtests.

After four years of attention, the curriculum packets were finally assembled into a format that could permit their being disseminated to parents. In every project year, parents had an opportunity to work on materials under the supervision of curriculum developers. It should be now possible to have community people work on packets with less step-by-step guidance by professionals.

The fourth-year evaluation report raised two negative points, both having to do with program implementation. The summer project attracted fewer children than in the past. This is believed to be due to less time being spent by professional personnel doing "door to door" selling of the program than had been spent in the past. The school-year program did not meet the full criterion for the number of parent workshops. The evaluators believe that this occurred because the school year was shortened by labor disputes at the beginning of the year.

In summary, the project was successful in meeting its goal of assisting Hispanic parents to help their children with academic work at the Potter-Thomas School. It was also successful, beyond the program planners preliminary expectations, in educating adults of the Potter-Thomas community and helping them earn the GED credential.

TABLE 1

ANALYSIS OF THE STANFORD ACHIEVEMENT TEST
WORD STUDY SKILLS TEST

Variable	Weight	Significance[1] (p.<)	Standard Error
Age:			
linear trend	-2856.486908	N.S.	1722.7991
quadratic trend	456.976020	.10	269.0964
cubic trend	-31.998311	.09	18.4809
cuartic trend	.827117	.09	.4709
Level:	5.99108	N.S.	4.8507
Pretest:			
linear trend	.684660	N.S.	14.5105
quadratic trend	.011439	N.S.	.3495
cubic trend	-.000141	N.S.	.0027
missing?	41.145805	N.S.	193.3422
Program Participation	2.86845	.03	1.4099

Notes and Comments:

Intercept = 6656; R-Square = .26; mean score = 111.2, standard deviation of scores around the regression hyperplane = 16.12, N = 113

[1] one-tailed t-test for Program Participation, two-tailed for the other variables; all tests of significance are for orthogonal effects

TABLE 2

ANALYSIS OF THE STANFORD ACHIEVEMENT TEST
VOCABULARY TEST

Variable	Weight	Significance[1] (p.<)	Standard Error
Age:			
linear trend	-673.071227	N.S.	1083.2170
quadratic trend	108.745533	N.S.	169.2309
cubic trend	-7.688424	N.S.	11.6261
cuartic trend	.201069	N.S.	.2963
Level:	11.241911	.001	3.009
Pretest:			
linear trend	-8.649504	N.S.	8.6818
quadratic trend	.486262	N.S.	.3933
cubic trend	-.007287	N.S.	.0056
missing?	-41.881829	N.S.	60.7926
Program Participation	2.692006	.002	.8870

Notes and Comments:

Intercept = 1668, R-Square = .51, mean score = 109; standard deviation of scores around the regression hyperplane = 10.09; N = 111

[1] one-tailed t-test for Program Participation, two-tailed for the other variables; all tests of significance are for orthogonal effects

TABLE 3

ANALYSIS OF THE STANFORD ACHIEVEMENT TEST
READING COMPREHENSION TEST

Variable	Weight	Significance[1] (p.<)	Standard Error
Age:			
linear trend	-1876.518267	N.S.	1209.9105
quadratic trend	305.663676	N.S.	188.7705
cubic trend	-21.820155	.10	12.9516
cuartic trend	.575548	.09	.3298
Level:	13.899394	.001	3.6376
Pretest:			
linear trend	.668864	N.S.	1.4552
quadratic trend	-.011970	N.S.	.0312
cubic trend	.000008	N.S.	.0002
missing?	11.998940	N.S.	19.8178
Program Participation	2.324118	.02	.9966

Notes and Comments:

Intercept = 4349, R-Square = .41, mean score = 119.25; standard deviation of scores around the regression hyperplane = 11.74; N = 120

[1] one-tailed t-test for Program Participation, two-tailed for the other variables; all tests of significance are for orthogonal effects

TABLE 4

ANALYSIS OF THE INTER-AMERICAN TOTAL READING SCORE

Variable	Weight	Significance[1] (p.<)	Standard Error
Age:			
linear trend	-533.547531	.005	186.1350
quadratic trend	95.102292	.005	33.2064
cubic trend	-7.164656	.007	2.5874
cuartic trend	.194727	.01	.0742
Pretest:			
linear trend	.790712	N.S.	1.1982
quadratic trend	-.001571	N.S.	.0292
cubic trend	-.000002	N.S.	.0002
missing?	24.617467	.10	14.4768
Program Participation	1.613919	.06	1.0126

Notes and Comments:

Intercept = 1077; R-Square = .54; mean score = 52.93; standard deviation of scores around the regression hyperplane = 14.55; N = 226

[1] one-tailed t-test for Program Participation, two-tailed for the other variables; all tests of significance are for orthogonal effects

TABLE 5

ANALYSIS FOR PERCENTAGE OF ATTENDANCE

Variable	Weight	Significance[1] (p.<)	Standard Error
Age:			
linear trend	-.788568	N.S.	.5415
quadratic trend	.177616	.10	.1046
cubic trend	.015957	.07	.0087
cuartic trend	.00050	.06	.0003
Previous Attendance:			
days	.002282	.002	.0007
missing?	.363282	.003	.1178
Program Participation	.013540	.01	.0057

Notes and Comments:

Intercept = 1.597, R-Square = .30; mean attendance = .876; standard deviation of scores around the regression hyperplane = .091, N = 349

[1] one-tailed t-test for Program Participation, two-tailed for the other variables; all tests of significance are for orthogonal effects